

# **Landsat Project Report**

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**Presented By:**

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# Landsat Mission Status

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- **Landsat 7**

- ◆ **Spacecraft**

- Gyro 3 Failure (Shut down May 5, 2004)
      - ◆ Working additional improvements for software gyro
    - Other Spacecraft Issues (non-critical)
      - ◆ Solid State Recorder – 4 memory boards
      - ◆ Electrical Power Subsystem – shunt #14 and shunt #6
      - ◆ Fuel Line Thermostat

- ◆ **ETM+**

- Scan Line Corrector Failure (May 31, 2003)
    - Bumper Mode Operations (April 1, 2007)

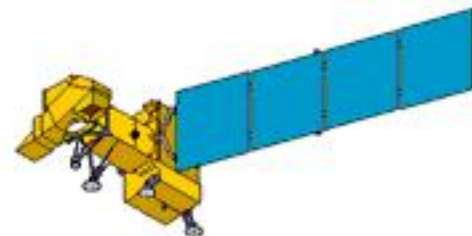
- **Landsat 5**

- ◆ **Spacecraft**

- Battery 2 Anomaly (On-going) – Oct 2007
    - Star Tracker Issue – June 2007
    - Solar Array Drive
      - ◆ Fixed array operations – Aug 2006

- ◆ **TM**

- Functioning normally in bumper-mode



# U.S. Landsat Archive Overview

(Marketable Scenes through December 31, 2007)

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- **ETM+: Landsat 7**

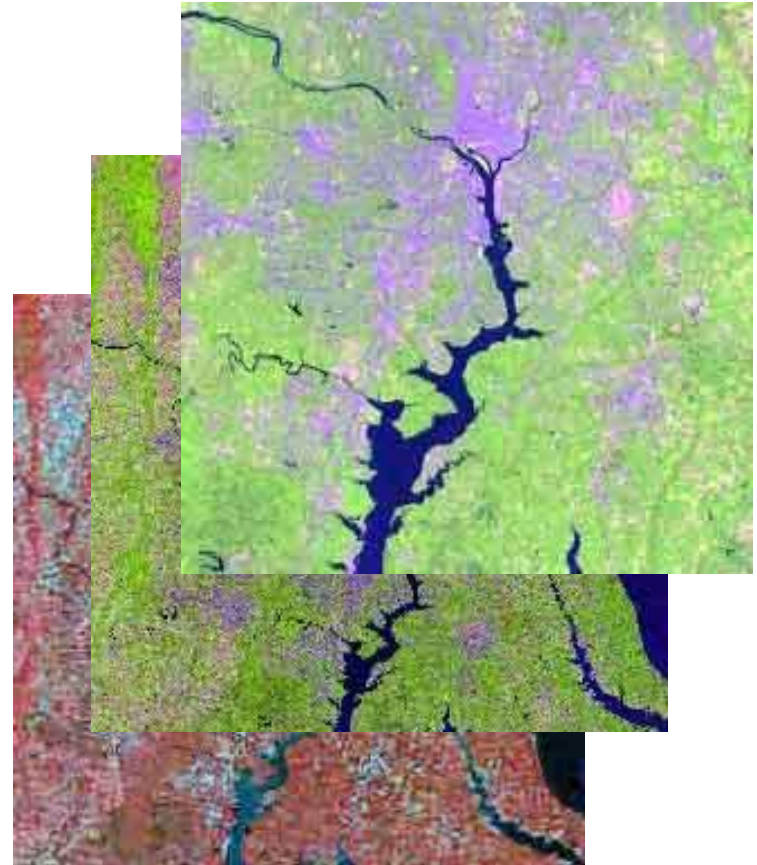
- ◆ 786,700 scenes
- ◆ 730TB RCC and L0Ra Data
- ◆ Archive grows by 260GB Daily

- **TM: Landsat 4 & Landsat 5**

- ◆ 734,627 scenes
- ◆ 368TB of RCC and L0Ra Data
- ◆ Archive Grows by 40GB Daily

- **MSS: Landsat 1 through 5**

- ◆ 649,423 scenes
- ◆ 19TB of Data



# FY07 Key Events and Activities

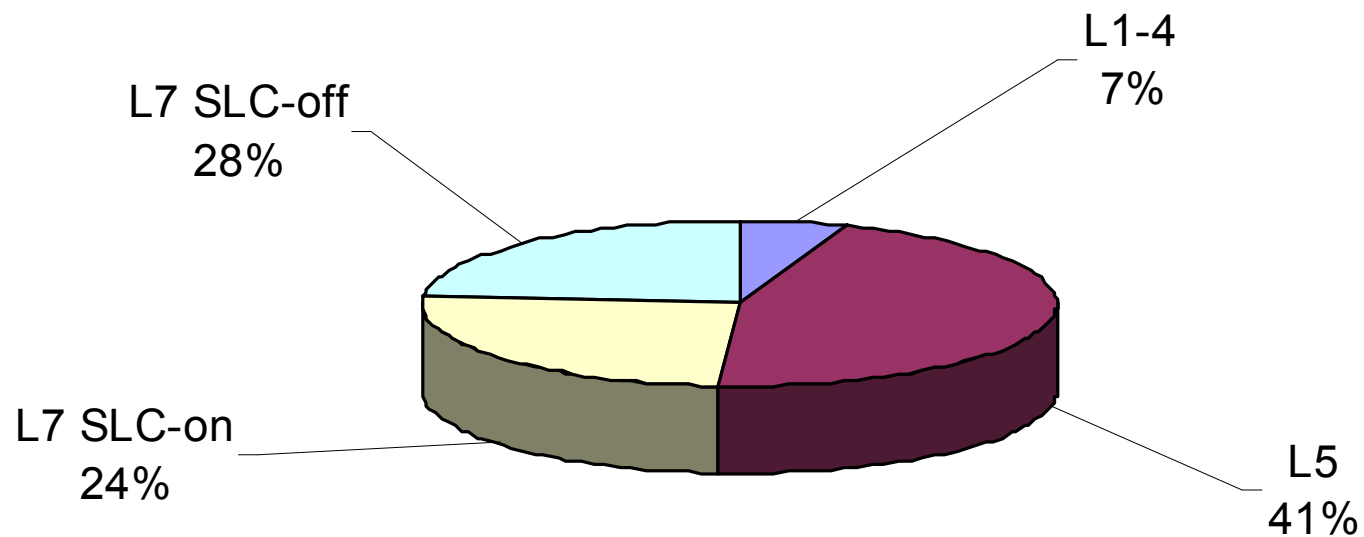
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- **Landsat 5 Flight Operations Contract transitioned to Honeywell**
- **Ground system transition to Linux continuing**
- **Transcription of approximately 595Tb of Landsat 1-5 data on ~9,600 tapes complete**
  - ◆ Over 1.2 Million scenes transcribed
  - ◆ Approximately 30,000 “new” scenes discovered – not previously in inventory
- **TM Calibration Improvements**
- **Landsat 5 Algorithms in IAS**
- **Off-site Archive started**
- **Upgrades to S-band transmitter and programmable demodulators**
- **Downlink test of IRS-P6 data**
- **Began Pilot – Landsat Data “web-enabled” at No Charge**

# Sales of Landsat

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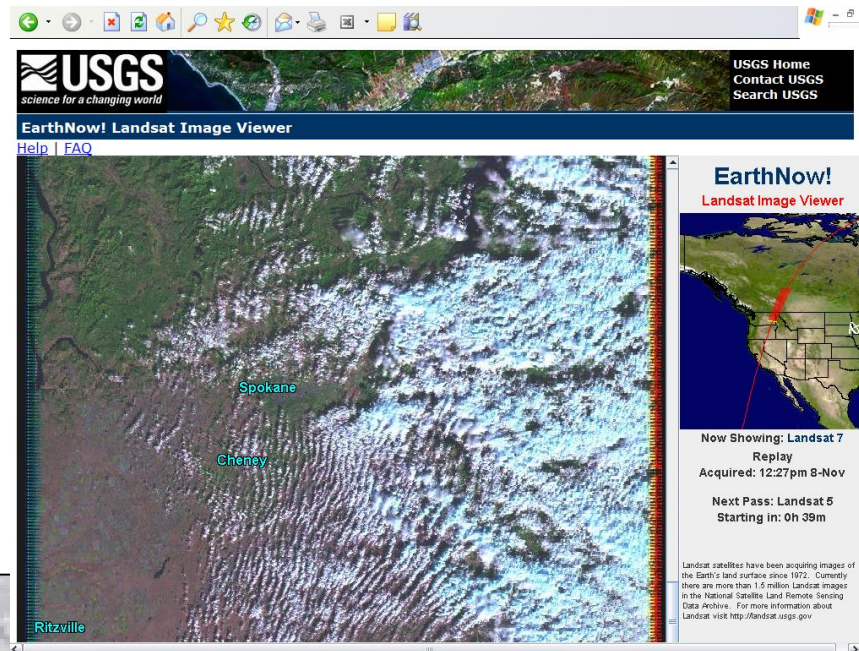
## Landsat FY07 Sales (Oct - Sep)



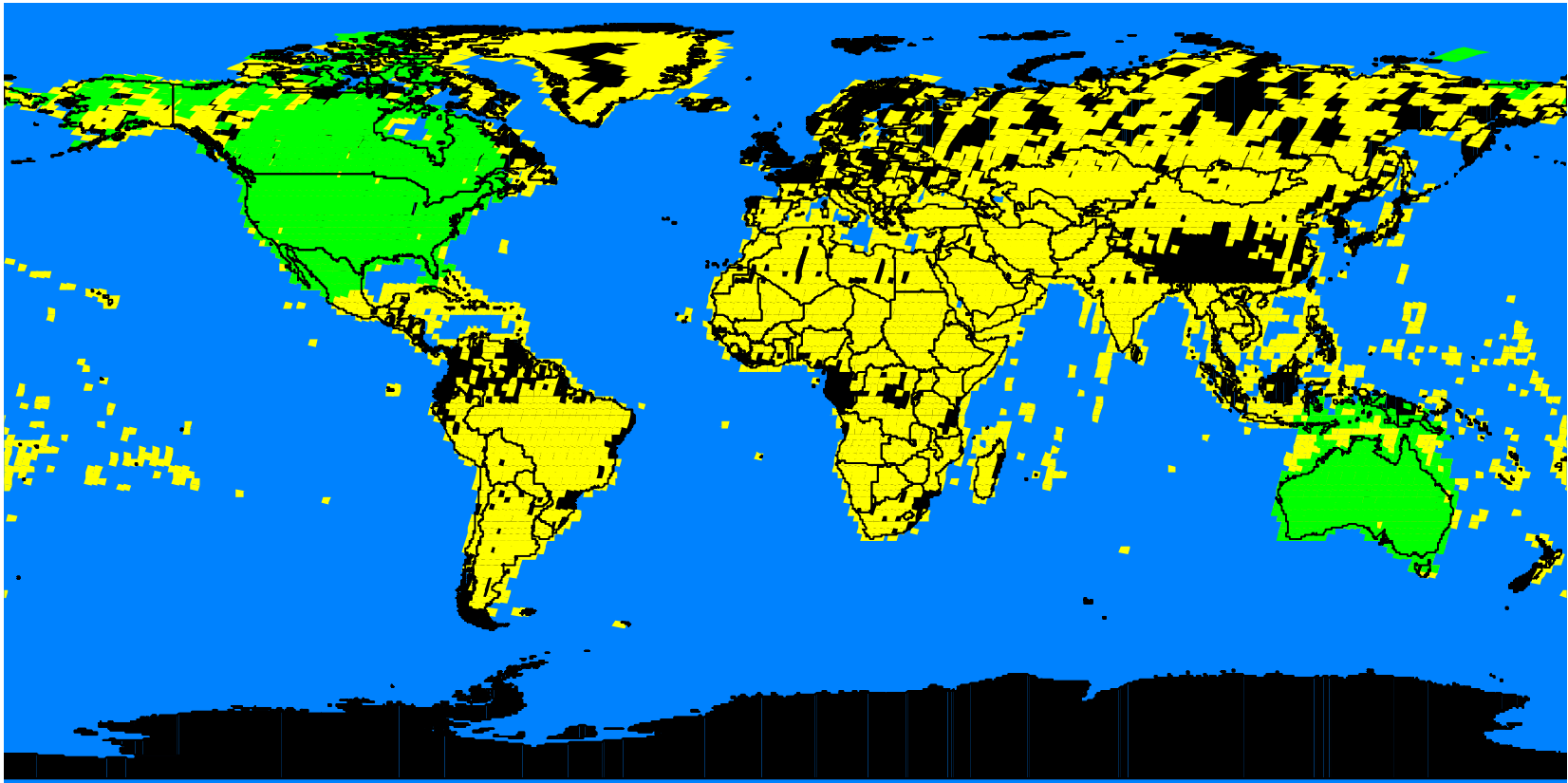


# Landsat Image Viewer

- <http://earthnow.usgs.gov>
- Total unique users since November: 82,263
- Average # of passes per person viewed: 8.9
- Maximum visitors in one day: 1,994
- Average # of daily visitors: 389



# Global Land Survey 2005 (GLS2005)



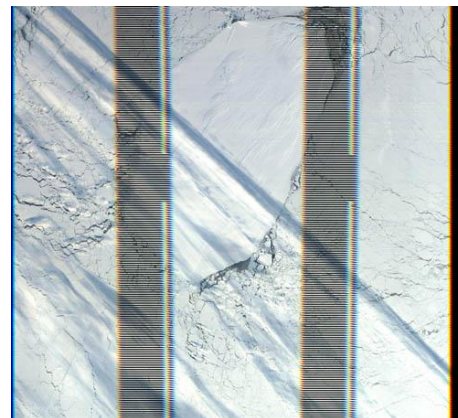
■ Landsat 7

■ Landsat 5

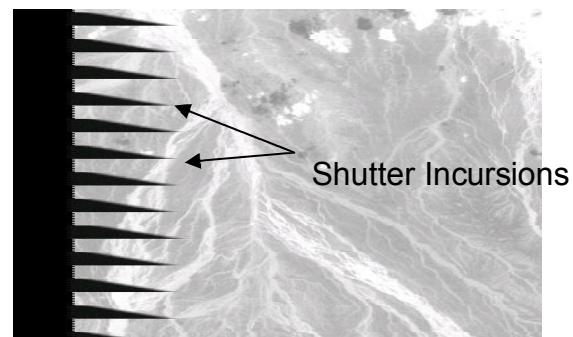
# Landsat 7 Bumper Mode Operations

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- Began Bumper Mode on April 1, 2007
- LPGS software updated
- New parameters in CPF added



Example of shutter incursions with Landsat 5



Example of recent shutter incursions with Landsat 7



# FY08 Plans

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- Re-processing of previous decadal Global Land Survey (GLS) data
- Begin processing GLS2005 data
- Expansion of L1T pilot
- Continue off-site archive of all raw data
- Landsat 5 algorithms in LPGS
- Completion of Linux transition
- Begin work on MSS Calibration
- Global metadata library initiative